

## AMENDMENTS TO THE CLAIMS

Cancel claims 1, 7, 8, 21, 22, 24, 27-32, and 34-42 without prejudice, add new claims 43-45, and amend the claims as shown below.

1. (Canceled)

2. (Currently Amended) The artificial tissue of claim 23 ~~+~~ further comprising epithelial cells from the same species as the connective tissue cells and the endothelial cells. ~~a third animal.~~

3. (Original) The artificial tissue of claim 2 wherein the epithelial cells form a multilayered epithelium.

4. (Currently Amended) The artificial tissue of claims ~~1 or 2~~ or 23 wherein the cells are mammalian cells. ~~first, second and third animals are mammals.~~

5. (Currently Amended) The artificial tissue of claim 4 wherein the mammal is ~~mammals are~~ selected from the group consisting of primate, mouse, pig, cow, cat, goat, rabbit, rat, guinea pig, hamster, horse, and ~~or~~ sheep.

6. (Currently Amended) The artificial tissue of claim 4 wherein the mammal is a human. ~~mammals are humans.~~

7. (Canceled)

8. (Canceled)

9. (Currently Amended) The artificial tissue of claims ~~1 or 2~~ or 23 wherein the support matrix comprises Vitrogen®.

10. (Currently Amended) The artificial tissue of claim ~~1 or 2~~ 44 wherein the microvascular endothelial cells comprise primary human adult lung microvascular cells.

11. (Currently Amended) The artificial tissue of claims ~~1 or 2~~ or 23 wherein the connective tissue cells comprise primary human adult dermal fibroblasts.

12. (Original) The artificial tissue of claims 2 or 3 wherein the epithelial cells comprise primary human adult keratinocytes.

13. (Original) An artificial tissue comprising Vitrogen®, primary human adult lung microvascular cells, and primary human dermal fibroblasts wherein the artificial tissue comprises one or more microvessels produced therein.

14. (Original) An artificial tissue comprising Vitrogen®, primary human adult lung microvascular cells, primary human dermal fibroblasts, and primary human keratinocytes wherein the artificial tissue comprises one or more microvessels produced therein.

15. (Currently Amended) The artificial tissue of claims ~~1 or 2~~ or 23 wherein the artificial tissue produces one or more compounds selected from the group consisting of laminin, fibronectin, collagen I, collagen III, hyaluronic acid, VEGF 145, VEGF 121, bFGF, IL-8, Syndecan-1, CXCR-1, CXCR-2, a mannose-containing protein, an acetylglucosamine-containing protein, PECAM-1, alpha-SMA, MMP-2, a growth factor receptor, plasminogen activator, mSRA, and CD68.

16. (Currently Amended) The artificial tissue of claim 45 ~~claims 1 or 2~~ wherein the one or more microvessels produce one or more blood cells.

17. (Currently Amended) The artificial tissue of claims 16 wherein the blood cells comprise mononuclear leukocytes.

18. (Currently Amended) The artificial tissue of claims ~~1 or 2~~ or 23 wherein the artificial tissue produces one or more periendothelial cells.

19. (Currently Amended) The artificial tissue of claims ~~1 or 2~~ or 23 wherein the artificial tissue produces an extracellular matrix.

20. (Currently Amended) The artificial tissue of claims ~~1 or 2~~ or 23 wherein the artificial tissue is self-maintained.

21. (Canceled)

22. (Canceled)

23. (Currently Amended) An The artificial tissue produced by a method comprising: mixing together a support matrix and connective tissue cells to form a support matrix-connective tissue mixture and forming a culture comprising two layers of support matrix-connective tissue mixture separated by a layer of endothelial cells, wherein said endothelial cells contact inner surfaces of the support matrix-connective tissue mixture layers, and wherein the cells are from the same species. ~~the method of claim 21 or claim 22.~~

24. (Canceled)

25. (Currently Amended) The artificial tissue of claims ~~1 or 2~~ or 23 wherein the tissue is maintained in vitro.

26. **(Currently Amended)** The artificial tissue of claims ~~1 or~~ 2 or 23 wherein the tissue is a composition suitable for tissue grafting.

27-42. **(Canceled)**

43. **(New)** The artificial tissue of claims 2 or 23 wherein the support matrix comprises only natural components.

44. **(New)** The artificial tissue of claims 2 or 23 wherein the endothelial cells comprise microvascular endothelial cells.

45. **(New)** The artificial tissue of claims 2 or 23 wherein the artificial tissue comprises one or more microvessels produced therein.